

Preliminary Design of Retroreflector Array for ASTRO-G in Highly Elliptic Orbit

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The follow-on mission of space VLBI experiments is scheduled to be launched in 2012. The satellite ASTRO-G is placed to a highly elliptic orbit, with the perigee of 1000 km and the apogee of 20000 km. Its orbit is required to be accurate at a few cm. Due to the orbit unfamiliar to the laser ranging community, we need to consider a number of variable factors such as range itself, angle of incidence, velocity aberration, etc.

We have preliminarily designed the retroreflector array to be carried on this satellite and simulated the retroreflected signals in terms of target signature studies.